

ABSTRACT

The genome of the non-human mutant mammal, deficient in an endogenous Sigma receptor, contains a mutation that comprises a disruption in an endogenous Sigma receptor gene, wherein said gene disruption gives rise to a mutant lacking detectable levels of endogenous Sigma receptor. The mutant may be used as a control animal for *in vivo* tests, as well as a source of cells that can be used in *in vitro* tests. Mutants deficient in the Sigma-1 receptor can be used as models for *in vivo* study of disorders of the central nervous system, memory alterations, stress conditions and drug addictions, analgesia processes and neuroprotection. Mutants deficient in the Sigma-2 receptor can be used to study diagnostic or therapeutic tools to fight cancer and/or degenerative processes and/or to design compounds capable of preventing, reducing or alleviating the secondary pathology associated with administration of neuroleptic agents.